

### **REMARKS/ARGUMENTS**

In this amendment, no claims are been amended, canceled, or added. Thus, claims 1-22 remain pending. Reconsideration of the rejected claims is respectfully requested.

#### **Rejection under 35 USC § 103, Alston in view of Lee**

Claims 1-11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alston (US 6,327,635) in view of Lee (US 6,650,096).

##### Claims 1-11

Claim 1 is allowable over the Alston in view of Lee as the proposed combination of the pulse width signal of Lee does not teach or suggest wherein "*said control signal is in the form of a pulse train for switching said switching element for said first value of said supply voltage, so sensed.*"

At page 13, the Office Action asserts that the combination would provide a control signal from driver 302 in the form of pulse train with a 0% duty cycle (Off) or 100% duty cycle (On) to switches 310, 312. *See Alston*, FIG. 3. Note that switches 310, 312 are turned On when a 3.3V supply voltage is available and are turned Off when the 3.3V supply voltage is not available. *See Alston*, FIG. 3 and col. 4 lines 35-50. Any other state besides always On or always Off would cause an incorrect voltage to be output on node 222.

However, as the term "pulse train" provides for a pulsed control signal having a duty cycle other than 0% or 100%, the proposed combination would not provide the claimed invention. For example, FIG. 5B of the present application shows some of the possible sets of control signals. *See present application*, paragraph 53. Certain control signals are shown as being either On, Off, or Switch. A switching state is differentiated from the On or Off state in that an On or Off signal does not switch. As the pulse train is used for switching said switching element, the pulse signal has a duty signal that is not 0% or 100%.

Additionally, claim differentiation requires that the "pulse train" has a duty cycle that differs from 0% and 100%. Claim 5 recites "a control signal [that] is in the form of a fixed level for said second value of said supply voltage." Also, Claims 6 and 7 recite that the fixed

level is to keep the switching element in an ON or OFF state, respectively. Thus, a fixed level control signal keeps the switching element ON or OFF, and a pulse train switches the switching element by using a duty cycle that is different from 0% or 100%.

For at least the reasons given, Applicant submits that claim 1 and its dependent claims 2-11 are allowable over Alston in view of Lee.

Claim 19

Claim 19 is allowable as Alston does not disclose or suggest each and every element of claim 19. For example, claim 19 recites:

*power distribution circuitry for connection to a power source solely through a two-pin connection to the power source, said connection providing a supply voltage between a voltage supply node and a ground node, said power distribution circuitry including:*  
*a voltage sensing circuit, configured to sense, at least at a predetermined time, said supply voltage and provide a voltage indication signal based on the supply voltage, so sensed;*  
*at least one DC-DC conversion circuit, connected to said voltage supply node and to an output node, for converting said supply voltage, so sensed, to a different desired output voltage and providing said different voltage on said output node; and*  
*a control circuit, coupled to said voltage sensing circuit and to said DC-DC conversion circuit for controlling said DC-DC conversion circuit depending on said supply voltage, so sensed.*

At page 7, the Office Action asserts that the power source selection circuitry 210 of Alston would be used in a hard drive due to the suggestion of Lee. In Alston, the power source selection circuitry 210 has a three-pin connector (3.3V, 5V, and ground). Thus, even assuming that Lee provides the suggestion of using the circuitry 210 in a hard drive, this combination does not provide for "*a two-pin connection to the power source, said connection providing a supply voltage between a voltage supply node and a ground node,*" as recited in claim 19. In particular, the combination does not teach or suggest this limitation where the hard drive has "*a control circuit, coupled to said voltage sensing circuit and to said DC-DC conversion circuit for controlling said DC-DC conversion circuit depending on said supply voltage, so sensed,*" as recited in claim 19.

For at least the reasons given, Applicant submits that claim 19 and its dependent claims 20-22 are allowable over Alston in view of Lee.

**Rejection under 35 USC § 103, Alston and Lee in further view of Shenai**

Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alston in view of Lee in further view of Shenai (US 5,959,439).

Claims 20-22 depend upon claim 19 and are allowable for at least the same rationale as claim 19. Shenai is cited as teaching conversions of voltage between 12 and 5 volts for a hard disk. Even assuming that Shenai teaches this limitation and that there is a motivation to combine, this teaching does not make up for the deficiencies in Alston and Lee with respect to these claims.

**Rejection under 35 USC § 102, Alston**

Claims 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Alston.

**Claims 12**

Claim 12 is allowable as Alston does not disclose or suggest each and every element of claim 12. For example, claim 12 recites:

*a voltage sensing circuit, configured to sense, at least at a predetermined time, a single supply voltage at one input node and provide a voltage indication signal based on the supply voltage, so sensed;*

*at least one DC-DC conversion circuit, connected to said input node and to an output node, for converting said single supply voltage, so sensed, to a different desired output voltage and providing said different voltage on said output node; and*

*a control circuit, coupled to said voltage sensing circuit and to said DC-DC conversion circuit for controlling said DC-DC conversion circuit depending on said supply voltage, so sensed.*

In Alston, driver 302 senses the voltage on input node 212. *See Alston*, Fig. 3 and col. 4 lines 1-2. At page 10, the Office Action asserts that regulator 308 is the DC-DC conversion circuit. Regulator 308 converts the 5V supply voltage that is received on a different input node 214 and transmitted to the VIN of regulator 308. *See Alston*, Fig. 3. Thus, the voltage sensing is done at input node 212, and the voltage regulator 308 converts a voltage at a different

input node 214. In contrast, claim 12 recites that a "*single voltage supply voltage*" is sensed at "*one input node*" and the DC-DC conversion circuit "*connected to said input node*" converts "*said single supply voltage*." Accordingly, Alston does not teach or suggest sensing and converting the same single supply voltage input at one node, as recited in claim 12.

For at least the reasons given, Applicant submits that claim 12 is allowable over Alston.

Claims 13-18

Applicants submit that claim 13, and its dependent claims 14-18, are allowable for at least the same reasons as claim 12. As claim 13 is allowable, its dependent claims 14-18 are allowable over Alston.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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